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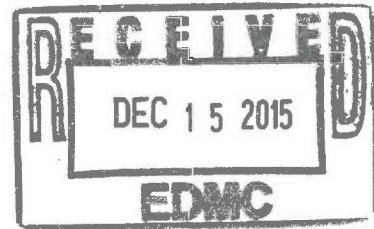
Meeting Minute Approval Sheet

**222-S Project Managers' Meeting
And Miscellaneous Laboratory Issues
(TSD: TS-2-1; Operating Unit 8)**

Ecology Offices, 3100 Port of Benton Blvd.

August 19, 2015

9:00 am – 10:00 am



DOE: *Lori Huffman* 12/2/2015
for: Lori Huffman Date

ECOLOGY: *Deborah Singleton* 12/07/2015
Deborah Singleton Date

TS-2-1

Meeting held on August 19, 2015

MEETING MINUTES

Page 1 of 2

Meeting Attendees:

See Attachment 1 for the list of attendees.

Agreements, Commitments, and Action Items:

DOE provided signed and approved minutes from the 6/17/15 meeting. See Attachment 1 to the 6/17/15 meeting minutes for the list of Action Items and Parking Lot Items.

No actions were closed and four actions were confirmed to be remaining open during this meeting. The status of each action was reviewed as follows:

- **Action Item #1:** WRPS to provide a brief synopsis of the condition of Tank 103. Synopsis will include statement about the condition the tank was left, knowledge of the contents/heel, DOE/Ecology communications, and agreements. Due date: 6/17/2015 (or the next PMM)
 - **Status:** WRPS discussed that research efforts have been focused on Action Item #2.
- **Action Item #2:** WRPS to provide a brief synopsis of the status of the piping staged in the T-8 tunnel alcove. Synopsis will include information about the flushing of the pipes, DOE/Ecology communication and agreements. Due date: 6/17/2015 (or the next PMM)
 - **Status:** WRPS discussed that research efforts have been focused on determining whether the piping can meet clean debris standards. A construction specification was discovered showing which sections of pipe were to be flushed. Further work will be done to determine the specific flush technique used and cross reference the construction specification with piping inventory.
- **Action Item #3:** WRPS to provide a written statement on actions that will be taken to repair laboratory ventilation ductwork and prevent future leaks of condensate. Due date: 6/17/2015 (or the next PMM)
 - **Status:** WRPS provided a revised written statement. Ecology indicated it was adequate and requested it attached to the meeting minutes. See Attachment 2 of these minutes.
- **Action Item #4:** WRPS to provide the most recent 207-SL sample analysis results to Ecology. Due date: 6/17/2015
 - **Status:** WRPS provided sample results. DOE will review and provide to Ecology. Action will be closed after Ecology receipt.

222-S TSD or Miscellaneous Issues:

222-S Project Manager's Meeting and Miscellaneous Laboratory Issues (TSD: TS-2-1; Operating Unit 8)

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The following miscellaneous issues were discussed:

- WRPS provided a briefing on the 222-SE (EF-4) engine compliance issues. Work to add a transfer switch to EF-1 is underway with a scheduled completion date before September 8, 2015. This will allow a temporary generator to supply power to EF-1 so that the EF-4 engine can be removed from service.
- Ecology stated they would like to visit the laboratory to see the duct that had leaked and establish an action to schedule the visit. See new **Action Item# 5**.

222-S RCRA TSD Permit Issues:

- Ecology related that there have been no further developments since the last PMM (June 17, 2015).

222-S Laboratory Operations and Analytical Status:

Analytical and Operational reports are attached to these minutes.

Additional discussion:

- Ecology inquired about the status and schedule for implementation of the new 222-S analytical contract. ORP confirmed that WAI had won the bid, but that there was a protest and no schedule could be set until after the protest had been settled.

Next Meeting:

October 21, 2015; Postponed to November 18, 2015

3100 Port of Benton Blvd. 9-10 am

Meeting held on August 19, 2015

Attachment 1

1. Agenda
2. Attendance Roster
3. 222-S Lab Operations and Analytical Reports
4. Action Items/Parking Lot Items

222-S Project Manager's Meeting and Miscellaneous Laboratory Issues (TSD: TS-2-1; Operating Unit 8)

Meeting held on August 19, 2015

**222-S Project Managers Meeting
And Miscellaneous Laboratory Issues
Washington State Department of Ecology Offices
3100 Port of Benton Blvd., Richland, WA**

August 19, 2015

Agenda

- 1. Introductions**
- 2. Approval of Previous Meeting Minutes**
- 3. Agreements, Commitments, and Status of Action Items**
- 4. 222-S TSD or Miscellaneous Issues**
- 5. 222-S RCRA TSD Permit Issues**
- 6. 222-S Laboratory**
 - a. Operations Report**
 - b. Analytical Report**
- 7. Review of New Action Items**

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222-S Project Manager's Meeting and Miscellaneous Laboratory Issues (TSD: TS-2-1; Operating Unit 8)

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WRPS Operations/Analytical Report

June 17 – August 18, 2015

Activities of Note	
Operational Activities	Date
Completed replacement of four valves in the 207-SL retention basin waste (RBW) system supporting future effluent transfers.	6/17/2015
Completed annual inspection of the 222-S main stack (296-S-21) stack probe and sample line.	7/23/2015
Performed calibration of the differential Pressure instrument for 296-S-16 stack. This instrument monitors the HEPA filter for the 219-S tank ventilation.	7/27/2015
Completed annual HEPA filter testing on all laboratory fume hoods.	7/29/2015
Completed concrete scanning for future EF-1 transfer switch installation.	7/29/2015
Completed installation of a new Thermal Desorption Unit for GC/MS located in lab 4-TUV.	8/13/2015

222-S Laboratory Upgrades	
Room 1GB Upgrade Project: Physical construction is complete. Work package will be closed out by the end of FY2015.	Status as of 8/18/2015
Room 4C Upgrade Project: Design is complete. Construction deferred until FY2017.	Status as of 8/18/2015

Analytical Equipment
<p><u>FY2014 Carryover:</u></p> <ul style="list-style-type: none"> Inductively Couples Plasma/Optical Emissions Spectrometer (ICP-OES): Equipment ordered, Room 1L hood in fabrication (re-work), installation expected during FY2015. Automated Solvent Extractor (ASE): Due to the need to install a larger hood, instrument installation is now planned for early FY2016. <p><u>New instruments for FY2015:</u></p> <ul style="list-style-type: none"> Gas Chromatography/Mass Spectrometry (GC/MS): Equipment received at 222S. Installation is expected in FY2015. Thermal Desorption Units (TDU): Equipment is installed. Testing completion is expected before the end of FY2015.

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Waste Shipments		
<i>Waste Type</i>	<i>Containers Shipped from 222S (5/12/15 – 8/17/15)</i>	<i>Receiving Facility</i>
LLW	51	Environmental Restoration Disposal Facility at Hanford (ERDF)
DW	33	PSC Environmental Services
Recycle	0	Toxco

LLW: Low-level radioactive waste

DW: Dangerous Waste (non-radioactive Dangerous Waste)

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ATL PMM Analytical Report - August 2015

Report On Time Deliverables: In June, 100% of deliverables were reported on time (17/17 on time or early). In July, 94.7% of deliverables were reported on time (18/19 on time or early). The deliverables metric for calendar year 2015 is 98.0% as of 8/6/15.

QA Evaluations/Proficiency Tests: 2014/15

Month	Study	Reported	Correct	Study %
Aug	BePAT-35	4	3	75.0%
Aug	IHPAT-198	12	12	100%
Sep	WP-234	103	102	99.0%
Nov	IHPAT-199	12	12	100%
Nov	MAPEP-31	38	38	100%
Nov	MRAD-21	38	37	97.4%
Dec	SOIL-88	154	151	98.1%
Dec	BePAT-36	4	4	100%
Feb	IHPAT-200	12	12	100%
March	WP-240	177	148	83.6%
April	WP-242 VOA	48	47	97.9%
May	WP-QR-VOA	45	45	100%
May	IHPAT-201	12	9	75.0%
May	MRAD-022	41	40	97.6%
June	MAPEP-32	49	48	98.0
June	Soil-90	176	175	99.4%
June	WP-243-VOA	48	48	100.0%
June	WP-244-VOA	43	43	100.0%
June	WP-QR-VOA	46	46	100.0%
June	WP-QR-VOA	46	46	100.0%

2015 YTD Performance: **95.2%**

Holding Time Performance:

- In June, 97.6% of holding times were met (449 were met; 11 were missed).
- In July 96.9% of holding times were met (388 were met, 12 were missed)
- The holding times metric for calendar year 2015 is 95.7% as of 8/6/15.

Projects in Progress:

- Hg & NH3 Vapor Tubes – WRPS vapor tubes for IH analysis
- SY103 Core 2015-07
- AX Farm 2015 (Vadose)
- 242A Evaporator Slurry 2015-05
- EC-03Boildown 2015

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- K East Bores Holes
- AY102 LDP 2015-07
- AP103 (EC-03) Evaporator 2015-06

Expected Sample Receipt:

- IH Hg & NH₃ WRPS Vapor Tubes – continues
- AP-105 Chemistry Control – tentative for August or September
- PFP 291-Z Plenum – Tentative 2015
- PFP WM-242-Z Waste Samples- Tentative for 2015
- K East Bores Holes – late August - September 2015

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**222S TSD TPA PMM
Action Items and Parking Lot Items**

<u>ACTION ITEMS</u>			
#	Action	Due Date	Status
5	Ecology to schedule 222S visit to observe ventilation duct leak.	10/21/15	OPEN
4	WRPS to provide the most recent 207-SL sample analysis results to Ecology.	10/21/15	OPEN
3	WRPS to provide a written statement on actions that will be taken to repair laboratory ventilation ductwork and prevent future leaks of condensate.	8/19/15	CLOSED
2	WRPS to provide a brief synopsis of the status of the piping staged in the T-8 tunnel alcove. Synopsis will include that statement about the flushing of the pipes, DOE/Ecology communication and agreements.	10/21/15	OPEN
1	WRPS to provide a brief synopsis of the condition of Tank 103. Synopsis will include statement about the condition the tank was left, knowledge of the contents/heel, DOE/Ecology communication, and agreements.	10/21/15	OPEN

<u>PARKING LOT ITEMS</u>		
#	Action	Resolution
PL1	Revise permit text regarding Tank 103 to better describe why Tank 103 is being left in place until Closure.	To be resolved during Permit Working Group meetings

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Attachment 2

222-S Laboratory Ventilation Duct Leak and Response

222-S Laboratory Ventilation Duct Leak and Response

Event Summary

On 3/15/15, all electrical power to the 222-S Laboratory was shut down for a scheduled outage. Required systems were kept operational using diesel generators and ventilation was maintained using a diesel engine coupled to one of four ventilation fans. Electrical power was restored on 3/31/15.

The following day, a small puddle of material was discovered on the concrete floor of the upper level of the lab during daily rounds. The puddle was located beneath the lowest point of a 31-inch diameter exhaust duct which ventilates approximately 25 laboratory fume hoods. At the time of cleanup the liquid had evaporated and solids had crystallized, however, the original puddle appeared to be less than 1 gallon of material. The material was found to originate from a small point of corrosion in a weld where a drain/trap assembly attached to the duct.

Contributing Factors

Several factors tied to the unique circumstances of the electrical outage are thought to have contributed to this event.

- There was no electricity to the building and no heat at the time of the leak, the only power originated with the diesel generators.
- Airflow was significantly reduced through the ductwork during the time the leak occurred as laboratory ventilation was provided by only one exhaust fan driven by a diesel engine.
- High humidity conditions existed due to several rainstorms that could have enhanced condensation formation, dissolved solids, and initiated the leak.

Also of note:

- A fixed contamination area is located on the floor beneath the portion of the duct involved, which may indicate a leak has occurred at this location in the past.
- A drain line is also located at the point in question in the ductwork. It is not drained regularly; workers tried during clean-up, but there was no drainage.

Immediate Response

- A plan for recovery was developed and the material on the floor was cleaned up on 4/6/15. The material was found to originate from a weld where the drain/trap assembly attached to the duct.
- Samples of the material were taken at the time of clean-up. Analytical results showed the substance to be mostly ammonium nitrate. Other constituents included <1% TOC, a trace of chloride, and salt.
- Waste designation based on these results indicated management of the cleanup material as State-Only dangerous waste.
- Placed catch basin beneath duct to capture any additional leakage.

Additional/Continuing Measures

- The drain/trap assembly was removed for examination and additional analysis of material in the drain/trap assembly.
- The issue was documented in a post job review. This information is available for use in planning future outages.
- Performed an examination of other selected areas of the ductwork system for accumulations of similar material.
- Continue surveillance of catch basin beneath the duct leak location for additional liquid. None has been observed since resuming normal ventilation flow.
- Initiated planning to replace the section of ductwork where the leak occurred.
- Developed a schedule for the duct replacement.

Remaining Actions

- Evaluate periodic operation of the drain trap valves to attempt clearing liquid present, should it occur.
- Replace section of ductwork where the leak occurred per schedule.